

Mr. Jeff Loeffler
Waupaca Foundry, Inc.
P.O. Box 249
Waupaca, WI 54981

Re: Significant Source Modification No:
123-12331-00019

Dear Mr. Loeffler:

Waupaca Foundry, Inc. applied for a Part 70 operating permit on November 20, 1997 for a gray and ductile iron foundry. An application to modify the source was received on May 31, 2000. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

One (1) Tumbleblast shotblast machine, identified as P55, with a maximum capacity of 18 tons of metal castings per hour, with emissions controlled by existing baghouse C15, and exhausting to stack S15. A new baghouse module will be added to existing baghouse C15 to accommodate the additional 20,000 acfm air flow from this new shotblast machine.

The Significant Source Modification approval will be incorporated into the pending Part 70 permit application pursuant to 326 IAC 2-7-10.5(l)(3). If there are no changes to the proposed construction of the emission units, the source may begin operating on the date that IDEM receives an affidavit of construction pursuant to 326 IAC 2-7-10.5(h). If there are any changes to the proposed construction the source can not operate until an Operation Permit Validation Letter is issued.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter call (800) 451-6027, press 0 and ask for Nisha Sizemore or extension 2-8356, or dial (317) 232-8356.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

nls

cc: File - Perry County
U.S. EPA, Region V
Perry County Health Department
Air Compliance Section Inspector - Richard Sekula
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley

Technical Support and Modeling - Michele Boner

PART 70 SIGNIFICANT SOURCE MODIFICATION, PSD OFFICE OF AIR QUALITY

**Waupaca Foundry, Inc.
9856 State Highway 66
Tell City, Indiana 47586**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

PSD Source Modification No.: 123-12331-00019	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date:

TABLE OF CONTENTS

A SOURCE SUMMARY

- A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]
- A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]
- A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

B GENERAL CONSTRUCTION CONDITIONS

- B.1 Permit No Defense [IC 13]
- B.2 Definitions [326 IAC 2-7-1]
- B.3 Effective Date of the Permit [IC13-15-5-3]
- B.4 Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]
- B.5 Significant Source Modification [326 IAC 2-7-10.5(h)]
- B.6 Phase Construction Time Frame
- B.7 BACT Determination for Phase Constructions

C GENERAL OPERATION CONDITIONS

- C.1 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]
- C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)]
- C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]
- C.4 Opacity [326 IAC 5-1]
- C.5 Operation of Equipment [326 IAC 2-7-6(6)]
- C.6 Stack Height [326 IAC 1-7]
- C.7 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]
- C.8 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]
- C.9 Maintenance of Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]
- C.10 Compliance Monitoring Plan - Failure to Take Response Steps
- C.11 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]
- C.12 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]
- C.13 General Record Keeping Requirements [326 IAC 2-7-5(3)]
- C.14 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

D.1 FACILITY OPERATION CONDITIONS - shotblast machine P55

Emission Limitations and Standards [326 IAC 2-7-5(1)]

- D.1.1 Particulate Matter (PM) [326 IAC 6-3-2]
- D.1.2 BACT PM/PM10, lead, and beryllium [326 IAC 2-2]
- D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements

- D.1.4 Emission Controls
- D.1.5 Testing Requirements [326 IAC 2-7-6(1),(6)]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- D.1.6 Visible Emissions Notations
- D.1.7 Parametric Monitoring
- D.1.8 Baghouse Inspections
- D.1.9 Broken Bag or Failed Bag Detection

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- D.1.10 Record Keeping Requirements

Certification

Waupaca Foundry, Inc.
Tell City, Indiana
Permit Reviewer: Nisha Sizemore

Page 3 of 18
Source Modification No. 123-12331-00019

SECTION A

SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary gray and ductile iron foundry.

Responsible Official:	James R. Larson, Vice President
Source Address:	9856 State Highway 66, Tell City, Indiana 47586
Mailing Address:	P.O. Box 249, Waupaca, Wisconsin 54981
SIC Code:	3321
County Location:	Perry
County Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program
	Major Source under PSD Rules;
	Major Source, Section 112 of the Clean Air Act
	1 of 28 listed source categories (secondary metal production)

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to construct and operate the following emission unit and pollution control device:

P55 Cleaning and Grinding, consisting of one (1) Tumbleblast shotblast machine, with a maximum capacity of 18 tons of metal castings per hour, with emissions controlled by existing baghouse C15, and exhausting to stack S15. A new baghouse module will be added to existing baghouse C15 to accommodate the additional 20,000 acfm air flow from this new shotblast machine.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONSTRUCTION CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this approval shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2 and 326 IAC 2-7 shall prevail.

B.2 Effective Date of the Permit [IC13-15-5-3]

Pursuant to 40 CFR Parts 124.15, 124.19 and 124.20, since public comments were received, the effective date of this permit will be thirty-three (33) days from its issuance.

B.3 Permit Expiration Date [326 IAC 2-2-8(a)(1)] [40 CFR 52.21(r)(2)]

Pursuant to 40 CFR 52.21(r)(2) and 326 IAC 2-2-8(a)(1) (PSD Requirements: Source Obligation) this permit to construct shall expire if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is discontinued for a continuous period of eighteen (18) months or more.

B.4 Significant Source Modification [326 IAC 2-7-10.5(h)]

This document shall also become the approval to operate pursuant to 326 IAC 2-7-10.5(h) when, prior to start of operation, the following requirements are met:

- (a) The attached affidavit of construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section, verifying that the emission units were constructed as proposed in the application. The emissions units covered in the Significant Source Modification approval may begin operating on the date the affidavit of construction is postmarked or hand delivered to IDEM if constructed as proposed.
- (b) If actual construction of the emissions units differs from the construction proposed in the application, the source may not begin operation until the source modification has been revised pursuant to 326 IAC 2-7-11 or 326 IAC 2-7-12 and an Operation Permit Validation Letter is issued.
- (c) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (d) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.

However, in the event that the Title V application is being processed at the same time as this application, the following additional procedures shall be followed for obtaining the right to operate:

- (1) If the Title V draft permit has not gone on public notice, then the change/addition covered by the Significant Source Modification will be included in the Title V draft.
- (2) If the Title V permit has gone thru final EPA proposal and would be issued ahead of the Significant Source Modification, the Significant Source Modification will go thru a concurrent 45 day EPA review. Then the Significant Source Modification will be incorporated into the final Title V permit at the time of issuance.
- (3) If the Title V permit has not gone thru final EPA review and would be issued after the Significant Source Modification is issued, then the Modification would be added to the proposed Title V permit, and the Title V permit will issued after EPA review.

B.5 Emergency Provisions [326 IAC 2-7-16]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-7-16.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality,
Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value.

Any operation shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

SECTION C GENERAL OPERATION CONDITIONS

C.1 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

- (a) Where specifically designated by this approval or required by an applicable requirement, any application form, report, or compliance certification submitted under this approval shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this approval, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after issuance of this approval, including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond the Permittee's control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAQ, upon request and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.
- (d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this approval.

(b) Any application requesting an amendment or modification of this approval shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this approval:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.5 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute, rule, or in this approval, all air pollution control equipment listed in this approval and used to comply with an applicable requirement shall be operated at all times that the emission unit vented to the control equipment is in operation.

C.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4(d), (e), and (f), and 326 IAC 1-7-5(d) are not federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.7 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]

(a) Compliance testing on new emission units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in

this approval, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this approval, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.8 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, compliance with applicable requirements shall be documented as required by this approval. All monitoring and record keeping requirements not already legally required shall be implemented upon startup. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

C.9 Maintenance of Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

- (a) In the event that a breakdown of the emission monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less often than once an hour until such time as the continuous monitor is back in operation.
- (b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

C.10 Pressure Gauge Specifications

Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

**C.11 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]
[326 IAC 1-6]**

- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. The compliance monitoring plan can be either an entirely new document, consist in whole information contained in other documents, or consist of a combination of new information and information contained in other documents. If the compliance monitoring plan incorporates by reference information contained in other documents, the Permittee shall identify as part of the compliance monitoring plan the documents in which the information is found. The elements of the compliance monitoring plan are:
 - (1) This condition;
 - (2) The Compliance Determination Requirements in Section D of this permit;
 - (3) The Compliance Monitoring Requirements in Section D of this permit;
 - (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
 - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAQ upon request and shall be subject to review and approval by IDEM, OAQ. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of:
 - (A) Reasonable response steps that may be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
 - (B) A time schedule for taking reasonable response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to take reasonable response steps shall constitute a violation of the permit.
- (c) Upon investigation of a compliance monitoring excursion, the Permittee is excused from taking further response steps for any of the following reasons:
 - (1) A false reading occurs due to the malfunction of the monitoring equipment. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously

submitted a request for an administrative amendment to the permit, and such request has not been denied or;

- (3) An automatic measurement was taken when the process was not operating; or
- (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (e) All monitoring required in Section D shall be performed at all times the equipment is operating. If monitoring is required by Section D and the equipment is not operating, then the Permittee may record the fact that the equipment is not operating or perform the required monitoring.
- (f) At its discretion, IDEM may excuse the Permittee's failure to perform the monitoring and record keeping as required by Section D, if the Permittee provides adequate justification and documents that such failures do not exceed five percent (5%) of the operating time in any quarter. Temporary, unscheduled unavailability of qualified staff shall be considered a valid reason for failure to perform the monitoring or record keeping requirements in Section D.

**C.12 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]
[326 IAC 2-7-6]**

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this approval exceed the level specified in any condition of this approval, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these corrective actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the response actions are being implemented. IDEM, OAQ shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAQ within thirty (30) days of receipt of the notice of deficiency. IDEM, OAQ reserves the authority to use enforcement activities to resolve noncompliant stack tests.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate approval conditions may be grounds for immediate revocation of the approval to operate the affected facility.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.13 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

-
- (a) Records of all required data, reports, and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAQ, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
 - (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of approval issuance.

C.14 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

- (a) The reports required by conditions in Section D of this approval shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (b) Unless otherwise specified in this approval, any notice, report, or other submission required by this approval shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) Unless otherwise specified in this approval, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) The first report shall cover the period commencing on the date of issuance of this approval and ending on the last day of the reporting period. Reporting periods are based on calendar years.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

P55 Cleaning and Grinding, consisting of one (1) Tumbleblast shotblast machine, with a maximum capacity of 18 tons of metal castings per hour, with emissions controlled by existing baghouse C15, and exhausting to stack S15. A new baghouse module will be added to existing baghouse C15 to accommodate the additional 20,000 acfm air flow from this new shotblast machine.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable PM emission rate from the shotblast machine identified as P55 shall not exceed 28.4 pounds per hour when operating at a process weight rate of 18.0 tons per hour. The pounds per hour limitation was calculated using the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.1.2 BACT for PM/PM10, lead, and beryllium

The Permittee shall comply with the following BACT requirements.

- (a) Pursuant to 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules), the PM/PM10 emissions from the baghouse C15 controlling shotblast machine P55 shall be limited to 0.005 grains per dry standard cubic foot of exhaust air and 34.3 pounds per hour. This is equivalent to an allowable increase of 0.86 pounds per hour of PM/PM10 emissions. Compliance with this limit will also satisfy the requirements of Condition D.1.1.
- (b) Pursuant to 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules), the lead emissions from the baghouse C15 controlling shotblast machine P55 shall be limited to 0.007 pounds per hour. This is equivalent to an allowable increase of 0.0003 pounds per hour of lead emissions.
- (c) Pursuant to 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules), the beryllium emissions from the baghouse C15 controlling shotblast machine P55 shall be limited to 0.0003 pounds per hour. This is equivalent to an allowable increase of 0.000001 pounds per hour of beryllium emissions.
- (d) The shotblast machine, identified as P55, shall be limited to a maximum throughput capacity of 18 tons of metal castings per hour;

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the shotblast machine P55 and baghouse C15.

Compliance Determination Requirements

D.1.4 Particulate Matter (PM)

In order to comply with D.1.1 and D.1.2, the baghouse C15 for PM control shall be in operation and control emissions from the shotblast machine P55 at all times that the shotblast machine P55 is in operation.

D.1.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

Within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up the Permittee shall perform PM, PM₁₀, lead, and beryllium testing from baghouse C15 using methods as approved by the Commissioner, in order to demonstrate compliance with conditions D.1.1 and D.1.2. Any stack which has multiple processes which exhaust to the same stack shall operate all of the processes simultaneously in accordance with 326 IAC 3-2.1 (Source Sampling Procedures). PM₁₀ includes filterable and condensible PM₁₀. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.6 Visible Emissions Notations

- (a) Visible emission notations of the baghouse C15 stack exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

D.1.7 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the shotblast machine P55, at least once per shift when the shotblast machine P55 is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 3.0 and 10.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any

one reading. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.8 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the shotblast machine P55 when the ventilation system is configured to vent to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.1.9 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.10 Record Keeping Requirements

- (a) To document compliance with Condition D.1.6, the Permittee shall maintain records of visible emission notations of the baghouse C15 stack exhaust once per shift.
- (b) To document compliance with Condition D.1.7, the Permittee shall maintain once per shift records of the following operational parameters during normal operation when venting to the atmosphere:
 - (1) Inlet and outlet differential static pressure; and
 - (2) Whether or not the cleaning cycle operations were functioning normally during each shift.

- (c) To document compliance with Condition D.1.8, the Permittee shall maintain records of the results of the inspections required under Condition D.1.8 and any dates the baghouse exhaust is changed from indoors to outdoors, and from the outdoors to the indoors.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

**PART 70 SOURCE MODIFICATION
CERTIFICATION**

Source Name: Waupaca Foundry, Inc.
Source Address: 9856 State Highway 66, Tell City, Indiana 47586
Mailing Address: P.O. Box 249, Waupaca Wisconsin 54981
Source Modification No.: 123-12331-00019

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.

Please check what document is being certified:

- 9 Test Result (specify) _____
- 9 Report (specify) _____
- 9 Notification (specify) _____
- 9 Affidavit (specify) _____
- 9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document for a Significant Source Modification to a Part 70 Operating Permit

Source Name:	Waupaca Foundry, Inc.
Source Location:	9856 State Highway 66, Tell City, IN 47586
County:	Perry
SIC Code:	3321
Operation Permit No.:	T123-9234-00019
Operation Permit Issuance Date:	not yet issued
Significant Source Modification No.:	123-12331-00019
Permit Reviewer:	Nisha Sizemore

On November 27, 2000, the Office of Air Quality (OAQ) had a notice published in The Perry County News, Tell City, Indiana, stating that Waupaca Foundry, Inc. had applied for a significant source modification to a Part 70 Operating Permit to operate a new shotblast machine with a baghouse for particulate matter control. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On December 18, 2000, Steven Klafka, Wingra Engineering, on behalf of Waupaca Foundry, submitted comments on the proposed significant source modification to the Part 70 permit. A summary of the comments is as follows:

Section A

Comment #1

To be consistent with the permit application and other cleaning and grinding operations at the facility, please refer to the new operation as "P55 - Cleaning and Grinding," rather than "P55 - Tumbleblast shotblast machine."

Response #1

The description is used to help IDEM staff identify what type of emission unit is being installed. The descriptions also help our inspections identify the units when they inspect the source. Therefore, it is important to provide as much information as possible in the descriptions. A general description such as "P55 Cleaning and Grinding" does not indicate what type of unit is being installed (e.g. a grinder, or a shotblast machine, or both), or how many units are being installed. The description has been changed as follows.

P55 Cleaning and Grinding, consisting of one one (1) Tumbleblast shotblast machine, identified as P55, with a maximum capacity of 18 tons of metal castings per hour, with emissions controlled by existing baghouse C15, and exhausting to stack S15. A new baghouse module will be added to existing baghouse C15 to accommodate the additional 20,000 acfm air flow from this new shotblast machine.

Section B

Comment #2

Regarding Condition B.2, please clarify if the “effective date,” which is 33 days after permit issuance, will affect the date construction of the new operation can begin.

Response #2

Construction of the new shotblast machine cannot begin until the effective date of the permit.

Section D

Comment #3

Regarding Condition D.1.2(a), the word “and” was omitted. The text should read, “0.005 grains per dry standard cubic foot of exhaust air **and** 34.3 pounds per hour.

Response #3

IDEM agrees and has made the requested change.

Comment #4

Regarding Condition D.1.2(a), please clarify if the allowable increase of 0.86 pounds per hour PM/PM10 is intended as a process limitation, or provided only for informational purposes. If this allowable increase is for informational purposes, the permit requirements would be clearer if the increase was omitted.

Response #4

The permit condition establishes an overall limit for the baghouse and then states what increase was allowed. IDEM does not believe that this condition creates any confusion. The applicable PM/PM10 limit is 0.005 gr/dscf and 34.3 pounds per hour.

Comment #5

Regarding Condition D.1.2(b), please clarify if the allowable increase of 0.0003 pounds per hour of lead is intended as a process limitation, or provided only for informational purposes. If this allowable increase is for informational purposes, the permit requirements would be clearer if the increase was omitted.

Response #5

The permit condition establishes an overall limit for the baghouse and then states what increase was allowed. IDEM does not believe that this condition creates any confusion. The applicable lead limit is 0.007 pounds per hour.

Comment #6

Regarding Condition D.1.2(c), please clarify if the allowable increase of 0.000001 pounds per hour of beryllium is intended as a process limitation, or provided only for informational purposes. If this allowable increase is for informational purposes, the permit requirements would be clearer if the increase was omitted.

Response #6

The permit condition establishes an overall limit for the baghouse and then states what increase was allowed. IDEM does not believe that this condition creates any confusion. The applicable beryllium limit is 0.0003 pounds per hour.

Comment #7

Regarding Condition D.1.3, since the PMP is for the baghouse C15, rather than the P55 - Cleaning and Grinding, please modify the text to read, "is required for the baghouse C15 controlling P55 - Cleaning and Grinding."

Response #7

The PMP is required for both the baghouse and the shotblast machine.

Comment #8

Regarding Condition D.1.8, some baghouse inspection procedures cannot be performed during actual operations. It is suggested that the following text be removed regarding baghouse inspection, "when venting to the atmosphere." Alternatively, the text could be modified to state, "when the ventilation system is configured to vent to the atmosphere."

Response #8

The requested change has been made as shown below.

D.1.8 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the shotblast machine P55 when ~~venting~~ **the ventilation system is configured to vent** to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

Comment #9

Regarding Condition D.1.9(b), a condition titled Emergency Provisions is referenced in the permit, but is not actually included in Section B.

Response #9

IDEM has added the Emergency Provisions condition to Section B of the permit. The new condition is shown below.

B.5 Emergency Provisions [326 IAC 2-7-16]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-7-16.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
 - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;

- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this

condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

- (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.**
- (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:**
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and**
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value.**

Any operation shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

Comment #10

Regarding Condition D.1.10(b)(2), the permit requires records of baghouse "cleaning cycle operation" once per shift. This might be interpreted as recording the periods when the bags are cleaned which would add an unnecessary record keeping burden. To clarify the record keeping requirements, it is suggested that the records indicate "whether or not the cleaning cycle operations were functioning normally during each "shift."

Response #10

IDEM agrees that the suggested change would clarify the intent of the condition. The requested change has been made to the permit. The response to comment #11 shows all changes to this condition.

Comment #11

Regarding Condition D.1.10(c), clarification is needed to the record keeping requirement for the baghouse "dates the vents are redirected." It might be better said to "record any dates the baghouse exhaust is changed from indoors to outdoors, and from the outdoors to the indoors."

Response #11

The requested change has been made to the permit, as shown below.

D.1.10 Record Keeping Requirements

-
- (a) To document compliance with Condition D.1.6, the Permittee shall maintain records of visible emission notations of the baghouse C15 stack exhaust once per shift.**

- (b) To document compliance with Condition D.1.7, the Permittee shall maintain once per shift records of the following operational parameters during normal operation when venting to the atmosphere:
 - (1) Inlet and outlet differential static pressure; and
 - (2) **Whether or not the cleaning cycle operations were functioning normally during each shift.**
- (c) To document compliance with Condition D.1.8, the Permittee shall maintain records of the results of the inspections required under Condition D.1.8 and **any** the dates the **baghouse exhaust is changed from indoors to outdoors, and from the outdoors to the indoors vents are redirected.**
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Upon further review, IDEM has decided to make the following additional changes to the permit:

Section A

- (1) A.1 (General Information) the following rule cite has been added, which is the definition of a major source in 326 IAC 2-7.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] **[326 IAC 2-7-1(22)]**
The Permittee owns and operates a gray and ductile iron foundry.

Section A

- (1) Since public comments were received on the draft permit, Condition B.2 has been changed to state that the effective date of this permit is 33 days after issuance.

B.2 Effective Date of the Permit [IC13-15-5-3]
Pursuant to 40 CFR Parts 124.15, 124.19 and 124.20, **since public comments were received**, the effective date of this permit will be ~~thirty (30)~~ **thirty-three (33)** days from its issuance. ~~If no public comments are received, then the permit shall be effective immediately upon issuance. Three (3) days shall be added to the thirty (30) day period, if service of notice is by mail.~~

- (2) Condition B.3 has been changed to be consistent with the wording in 40 CFR 52.21(r)(2) and 326 IAC 2-2-8(a)(1), which are the applicable rules for construction of PSD modifications.

B.3 **Permit Expiration Date** ~~Revocation of Permits [326 IAC 2-1-9(b)]~~ **[326 IAC 2-2-8(a)(1)]** **[40 CFR 52.21(r)(2)]**
Pursuant to **40 CFR 52.21(r)(2) and 326 IAC 2-2-8(a)(1) (PSD Requirements: Source Obligation)** ~~326 IAC 2-1-9(b)(Revocation of Permits)~~, the Commissioner may revoke this permit **to construct shall expire** if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is ~~suspended~~ **discontinued** for a continuous period of ~~one (1) year~~ **eighteen (18) months** or more.

Section C

- (1) Monitoring and record keeping requirements for new emission units are required to be implemented upon startup; therefore, it was necessary to change Condition C.8 accordingly.

C.8 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, compliance with applicable requirements shall be documented as required by this approval. All monitoring and record keeping requirements not already legally required shall be implemented **upon startup.** ~~within ninety (90) days of approval issuance.~~ The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. ~~If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:~~

~~_____ Indiana Department of Environmental Management
_____ Compliance Branch, Office of Air Quality
_____ 100 North Senate Avenue, P. O. Box 6015
_____ Indianapolis, Indiana 46206-6015~~

~~_____ in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.~~

~~The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~

The following changes were made to Condition C.11 (Compliance Monitoring Plan - Failure to Take Response Steps).

C.11 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6] [326 IAC 1-6]

(a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. **The compliance monitoring plan can be either an entirely new document, consist in whole information contained in other documents, or consist of a combination of new information and information contained in other documents. If the compliance monitoring plan incorporates by reference information contained in other documents, the Permittee shall identify as part of the compliance monitoring plan the documents in which the information is found. The elements of the** ~~This compliance monitoring plan is comprised of are:~~

- (1) This condition;
- (2) The Compliance Determination Requirements in Section D of this permit;
- (3) The Compliance Monitoring Requirements in Section D of this permit;
- (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
- (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAQ upon request and shall be subject to review and approval by IDEM, OAQ. The CRP shall be prepared within

ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of :

- (A) **Reasonable** response steps that ~~may will~~ be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
 - (B) A time schedule for taking **reasonable** ~~such~~ response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this permit, ~~appropriate~~ **reasonable** response steps shall be taken when indicated by the provisions of that compliance monitoring condition. ~~Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan to take reasonable response steps shall constitute a violation of the permit. unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.~~
- (c) ~~After investigating the reason for the excursion,~~ **Upon investigation of a compliance monitoring excursion**, the Permittee is excused from taking further response steps for any of the following reasons:
- (1) ~~The monitoring equipment malfunctioned, giving a false reading.~~ **A false reading occurs due to the malfunction of the monitoring equipment.** This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;
 - (3) An automatic measurement was taken when the process was not operating; or
 - (4) The process has already returned **or is returning** to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (e) **All monitoring required in Section D shall be performed at all times the equipment is operating. If monitoring is required by Section D and the equipment is not operating, then the Permittee may record the fact that the equipment is not operating or perform the required monitoring.**
- (f) **At its discretion, IDEM may excuse the Permittee's failure to perform the monitoring and record keeping as required by Section D, if the Permittee provides adequate justification and documents that such failures do not exceed five percent (5%) of the operating time in any quarter. Temporary, unscheduled unavailability of qualified staff shall be considered a valid reason for failure to perform the monitoring or record keeping requirements in Section D.**

- (2) For clarification, a sentence has been added to Condition D.1.2(a) stating that compliance with the PM/PM10 limit in D.1.2(a) will also be sufficient to demonstrate compliance with the limit pursuant to 326 IAC 6-3-2 (Process Operations), which is stated in Condition D.1.1. Changes to the condition are shown below.

D.1.2 BACT for PM/PM10, lead, and beryllium

The Permittee shall comply with the following BACT requirements.

- (a) Pursuant to 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules), the PM/PM10 emissions from the baghouse C15 controlling shotblast machine P55 shall be limited to 0.005 grains per dry standard cubic foot of exhaust air and 34.3 pounds per hour. This is equivalent to an allowable increase of 0.86 pounds per hour of PM/PM10 emissions.
Compliance with this limit will also satisfy the requirements of Condition D.1.1.

General Changes throughout the permit.

- (2) The Office of Air Management (OAM) has changed its name to the Office of Air Quality (OAQ). This change has been made throughout the permit.

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for a Part 70 Significant Source Modification Requiring PSD Review.

Source Background and Description

Source Name:	Waupaca Foundry, Inc.
Source Location:	9856 State Highway 66, Tell City, IN 47586
County:	Perry
SIC Code:	3321
Operation Permit No.:	T123-9234-00019
Operation Permit Issuance Date:	not yet issued
Significant Source Modification No.:	123-12331-00019
Permit Reviewer:	Nisha Sizemore

The Office of Air Management (OAM) has reviewed a modification application from Waupaca Foundry, Inc. relating to the construction of the following emission units and pollution control devices:

One (1) Tumbleblast shotblast machine, identified as P55, with a maximum capacity of 18 tons of metal castings per hour, with emissions controlled by existing baghouse C15, and exhausting to stack S15. A new baghouse module will be added to existing baghouse C15 to accommodate the additional 20,000 acfm air flow from this new shotblast machine.

History

On January 7, 1998, Waupaca Foundry, Inc. submitted an application to the OAM requesting to construct one new shotblast machine, two new core machines, and two new core sand mixers. The installation of the shotblast machine, the new core machines, and the new core sand mixers are necessary in order for the source to be able to produce smaller castings than they are currently capable of producing. Since all of these emission units are necessary in order to accommodate the production of these new smaller castings, the OAM has determined that the installation of these emission units should be considered as a single modification for the purposes of determining PSD applicability.

Even though the installation of these emission units is being considered as a single modification, this PSD permit is only for approval to construct and operate the new shotblast machine. The OAM is still in the process of reviewing the BACT proposal for the new core machines and core sand mixers. It is anticipated that another separate PSD permit, identified as Significant Source Modification 123-12948-00019, will be issued at a later date for approval to construct and operate the core machines and core sand mixers, and for the increased utilization of the rest of the emission units at the foundry. These two permits are being issued separately in order to

accommodate Waupaca Foundry's expeditious schedule for construction of the shotblast machine. However, issuing two separate PSD permits will in no way allow Waupaca Foundry to circumvent the requirements of the PSD rules. Even though the emissions from the shotblast machine alone are less than the PSD applicability thresholds, the shotblast machine will still be subject to the requirements of PSD because the total emissions from the project are greater than the PSD applicability thresholds. The emissions from the rest of the project include emissions from the core machines and core sand mixers as well as emissions from the increased utilization of other existing emission units at the foundry which will occur as a result of this project. The increased utilization of other existing foundry emission units is due to the fact that the foundry plans to increase overall plant production due to its newly acquired capability to produce the smaller castings.

Waupaca Foundry, Inc. submitted a Part 70 permit on November 20, 1997.

Enforcement Issue

The source has the following enforcement actions pending:

- (1) A notice of violation (NOV) has been issued to the source for failure to install and operate a baghouse to control emissions from the cupola scrap and charge handling process.
- (2) A notice of violation (NOV) has been issued to the source for opacity violations.
- (3) A referral has been sent to the Office of Enforcement because the source failed some stack tests.
- (4) A referral has been sent to the Office of Enforcement because the source made modifications to the existing ductile iron treatment stations prior to obtaining a PSD permit.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
existing stack S15	existing baghouse C15 controlling new shotblast machine identified as P55	180	16.0	780,000	100

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on May 31, 2000. Additional information was received on August 2, 2000, August 31, 2000, and October 31, 2000.

Emission Calculations

The calculations submitted by the applicant have been verified and found to be accurate and correct. These calculations are provided in Appendix A of this document. (1 page)

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

This table reflects the PTE before controls for the only the shotblast machine. The OAM has not yet determined the total emissions from the parts of the modification which are anticipated to be permitted at a later date. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit for shotblast machine only (tons/year)
PM	1340
PM-10	1340
SO ₂	0.00
VOC	0.00
CO	0.00
NO _x	0.00

HAP's	Potential To Emit for shotblast machine only (tons/year)
lead	0.3967
arsenic	0.0106
beryllium	0.0015
cadmium	0.0023
nickel	0.2144
antimony	0.1139
cobalt	0.0402
chromium	0.5964
copper	1.2465
manganese	6.1827
selenium	0.0134
TOTAL	8.8186

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(f)(1), which states that any modification subject to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) requires a significant source modification.

County Attainment Status

The source is located in Perry County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Perry County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Perry County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	483
PM-10	483
SO ₂	208
VOC	587
CO	4869
NO _x	293

This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the 28 listed source categories, specifically a secondary metal production facility.

These emissions are based upon the technical support document for CP 123-8451-00019.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)							
Process/facility	PM	PM-10	SO ₂	VOC	CO	NO _x	lead	beryllium
shotblast machine	3.75	3.75	0.00	0.00	0.00	0.00	0.001	0.000004
PSD Significance Level	25	15	40	40	100	40	0.6	0.0004

This modification to an existing major stationary source is major. Even though the emissions from the shotblast machine alone are less than the PSD applicability thresholds, the shotblast machine will still be subject to the requirements of PSD because the total PM, PM10, SO₂, VOC, CO, NO_x, lead, and beryllium emissions from the project are greater than the PSD applicability thresholds. As discussed on page 1 of this document, this approval only covers part of the project—the shotblast machine. The emissions from the rest of the project include emissions from the core machines and core sand mixers as well as emissions from the increased utilization of other existing emission units at the foundry which will occur as a result of this project. The increased utilization of other existing foundry emission units is due to the fact that the foundry plans to increase overall plant production due to its newly acquired capability to produce the smaller castings. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements apply.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 61 or 63) applicable to this proposed modification.

State Rule Applicability - Individual Facilities

326 IAC 6-3-2 (Process Operations)

Pursuant to this rule the particulate matter (PM) from the shotblast machine identified as P55 shall not exceed 28.4 pounds per hour when operating at a process weight rate of 18.0 tons per hour. The limit is determined by use of the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The baghouse identified as C15 shall be in operation at all times the shotblast machine identified as P55 is in operation, in order to comply with this limit.

326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Rules)

This proposed modification is subject to the Prevention of Deterioration (PSD) rules for PM and PM₁₀ because the emissions from these pollutants are above the PSD significant threshold levels reported in 326 IAC 2-2-1. Therefore, the PSD provisions require that this major modification be reviewed to ensure compliance with the National Ambient Air Quality Standards, the applicable PSD air quality increments, and the requirements to apply the best available control technology on the project's emissions.

The *Air Quality Analysis* report included in Appendix C was conducted to show that this major modification does not violate the National Ambient Air Quality Standards (NAAQS) and does not exceed the incremental consumption above 80 percent of the PSD increment for any pollutant. The best available control technologies (BACT) for the shotblast machine covered in this major modification is determined on a case-by-case basis by reviewing similar process controls and new available technologies. In addition, the cost per ton of pollutant removed, energy requirements, and environmental impacts are weighed in IDEM's final decision. Control technology summaries of the facilities covered in this major modification are discussed in the *BACT Analysis Report* included in Appendix B.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as follows:

The baghouse C15 controlling shotblast machine P55 has applicable compliance monitoring conditions as specified below:

- (a) Visible emissions notations of the shot blasting stack exhaust shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and

corrective actions for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

- (b) The Permittee shall record the total static pressure drop across the baghouse controlling the shot blasting system, at least once per shift when the shot blasting system is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 3.0 to 10.0 inches of water or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range for any one reading. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (c) An inspection shall be performed each calendar quarter of all bags controlling the foundry processes. All defective bags shall be replaced.
- (d) In the event that bag failure has been observed.
 - (1) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
 - (2) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (e) The Permittee shall perform stack tests for PM and PM10 from baghouse C15 controlling the new shotblast machine P55 using methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensable PM-10.

These monitoring conditions are necessary in order to ensure compliance with 326 IAC 2-2 (PSD) and 326 IAC 6-3-2 (Process Operations).

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 123-12331-00019.

D - USEPA, Compilation of Air Pollutant Emission Factors, Volume 1, 5th Edition, Jan 1995 and Supplement B issued Oct 1996.
E - Speciation developed from analysis of dust collected by control device or analysis of stack test PM emissions.

Stack	S15	Thruput (TPH)	Flow (acfm)	Stack	PM lbs/hr	gr/acf	gr/scf
Baghouse	C15	18	20000	MTE	306	1.785	1.893
Process	P55		Temp. (F)	Outlet	0.86	0.005	0.005
Descrip.	Cleaning & Grinding		100	Eff. (%)	99.72		

[illegible]

BACT ANALYSIS REPORT

On January 7, 1998, Waupaca Foundry, Inc. submitted an application to the OAQ requesting to construct one new shotblast machine, two new core machines, and two new core sand mixers. The installation of the shotblast machine, the new core machines, and the new core sand mixers are necessary in order for the source to be able to produce smaller castings than they are currently capable of producing. Since all of these emission units are necessary in order to accommodate the production of these new smaller castings, the OAQ has determined that the installation of these emission units should be considered as a single modification for the purposes of determining PSD applicability.

Even though the installation of these emission units is being considered as a single modification, this PSD permit is only for approval to construct and operate the new shotblast machine. The OAQ is still in the process of reviewing the BACT proposal for the new core machines and core sand mixers. It is anticipated that another separate PSD permit, identified as Significant Source Modification 123-12948-00019, will be issued at a later date for approval to construct and operate the core machines and core sand mixers, and for the increased utilization of the rest of the emission units at the foundry. These two permits are being issued separately in order to accommodate Waupaca Foundry's expeditious schedule for construction of the shotblast machine. However, issuing two separate PSD permits will in no way allow Waupaca Foundry to circumvent the requirements of the PSD rules. Even though the emissions from the shotblast machine alone are less than the PSD applicability thresholds, the shotblast machine will still be subject to the requirements of PSD because the total emissions from the project are greater than the PSD applicability thresholds. The emissions from the rest of the project include emissions from the core machines and core sand mixers as well as emissions from the increased utilization of other existing emission units at the foundry which will occur as a result of this project. The increased utilization of other existing foundry emission units is due to the fact that the foundry plans to increase overall plant production due to its newly acquired capability to produce the smaller castings.

The best available control technology (BACT) analyses for PM, PM₁₀, lead, and beryllium have been conducted in accordance with the top-down guidance policy outlined in the 1990 draft USEPA *New Source Review Workshop Manual*. The USEPA RACT/BACT/LAER Clearinghouse and related state permits were reviewed for control technology information. Indiana's new source toxics control rule (326 IAC 2-1-3.4) requires that similar control technology review HAP emission limitations representing maximum achievable control technology (MACT). The proposed permit contains emission limitations that satisfy both sets of requirements.

Cleaning and Finishing Operations

A new shotblast machine, identified as P55 is being installed in the finishing area of the plant. The new shotblast machine will be controlled by existing baghouse C15 which already controls existing lines 5, 6, and 7 pouring, cooling, and shakeout operations, line 8 pouring and cooling operations, and sand mulling, handling, blending, and cooling operations. These operations were permitted by CP123-8451-00019. The baghouse will still exhaust to existing stack S15.

BACT Analysis for PM/PM10, Pb, and Be

Two (2) control methods to remove particulate emissions from the shotblast machine were evaluated including a baghouse system and high energy venturi scrubber system. The baghouse system was chosen as BACT because it is more effective in controlling the particulate emissions. The outlet grain loading of the baghouse system C15 shall not exceed 0.005 grains per dry standard cubic feet (gr/dscf), which is consistent with similar BACT determinations recently conducted. The potential controlled emissions from the new P55 shotblast machine are 0.86 pounds of PM/PM10 per hour, 0.0003 pounds of Pb per hour, and 0.000001 pounds of Be per hour. The total potential controlled emissions from baghouse C15 are 34.3 pounds of PM/PM10 per hour, 0.007 pounds of Pb per hour,

and 0.0003 pounds of Be per hour.